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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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04/14/2004

Michael C. Lewis

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EXAMINER

TAN, ALVIN H

ART UNIT

PAPER NUMBER

2173

MAIL DATE

DELIVERY MODE

06/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/824,904 | Applicant(s) LEWIS ET AL. | |
| | Examiner ALVIN H. TAN | Art Unit 2173 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 13, 25 and 32-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 13, 25, 32-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

1. This Office action is responsive to the Request for Continued Examination (RCE) filed under 37 CFR §1.53(d) for the instant application on 3/12/08. Applicants have properly set forth the RCE, which has been entered into the application, and an examination on the merits follows herewith.

Claims 1, 13, 25, and 32-40 have been examined and rejected. This Office action is responsive to the amendment filed on 3/12/08, which has been entered in the above identified application.

Claim Objections

2. Claims 25 and 38-40 are objected to because of the following informalities:

- a. On *[line 8]* of claim 25, Examiner suggests changing "the plurality of variable-sized bins variable-sized bin by variable-sized bin" to --the plurality of bins bin by bin--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 13, 25, and 32-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al (U.S. Patent No. 6,424,345), herein after Smith, and Arenburg et al (U.S. Patent No. 6,191,800 B1), herein after Arenburg.

Claims 1, 32-34 (Method)

Claims 13, 35-37 (Computer Readable Medium)

Claims 25, 38-40 (System)

4-1. Regarding claims 1, 13, and 25, Smith teaches the claim for providing a graphical image on a display of a system, the graphical image being provided from data describing a plurality of primitives, comprising storing the plurality of primitives in a plurality of bins and rendering the plurality of primitives by rendering each of the plurality of bins bin by bin, by disclosing *[figure 3; column 4, lines 61-67; column 5, lines 1-22]*.

Smith does not expressly teach adjusting the capacity of one or more of the bins during operation of the system. Arenburg teaches dividing a viewable area of a display device into a plurality of tiles and adjusting sizes of tiles in order to better manage graphic workloads *[column 2, lines 55-63; column 3, lines 12-30]*. Since Smith teaches rendering a graphical image on a display of a system, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the sizes of tiles, as taught by Arenburg. This would allow for better management of graphic workloads when rendering graphics.

4-2. Regarding claims 32, 35, and 38, Smith and Arenburg teach the claim with respect to claims 1, 13, and 25 respectively, wherein adjusting the capacity of one or more of the bins during operation of the system comprises dynamically adjusting the capacity of one or more of the bins during operation of the system, by disclosing dynamically adjusting the sizes *[column 4, lines 39-51]*.

4-3. Regarding claims 33, 36, and 39, Smith and Arenburg teach the claim with respect to claims 1, 13, and 25 respectively, wherein adjusting the capacity of one or more of the bins during operation of the system comprises adjusting the capacity of one or more of the bins based on a capacity level of the bins, by disclosing adjusting the size based on time required to render a portion of the image *[column 4, line 61 to column 5, line 1]*.

4-4. Regarding claims 34, 37, and 40, Smith and Arenburg teach the claim with respect to claims 1, 13, and 25 respectively, wherein adjusting the capacity of one or more of the bins during operation of the system comprises combining bins or portions of bins, by disclosing *[figures 3A]* which shows three tiles and *[figure 3B]* which shows the three tiles after their sizes have been adjusted.

Response to Arguments

5. The Examiner acknowledges the Applicant's amendments to claims 1, 13, and 25, the cancellation of claims 7, 12, 19, 24, and 29, and the addition of claims 32-40. Regarding independent claims 1, 13, and 25, the Applicant alleges that Smith et al (U.S. Patent No. 6,424,345), as described in the previous Office action, does not explicitly teach the claims as amended. Examiner has therefore rejected independent claims 1, 13, and 25 under 35 U.S.C § 103 as being unpatentable over Smith and Arenburg et al (U.S. Patent No. 6,191,800 B1). See section 4-1.

Newly added claims 32-40 have been rejected under 35 U.S.C § 103 as being unpatentable over Smith and Arenburg.

Applicant states that dependent claims 32-40 recite all the limitations of the independent claims, and thus, are allowable in view of the remarks set forth regarding independent claims 1, 13, and 25. However, as discussed above, Smith and Arenburg are considered to teach claims 1, 13, and 25, and consequently, claims 32-40 are rejected.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALVIN H. TAN whose telephone number is (571)272-8595. The examiner can normally be reached on Mon-Fri 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis Chow can be reached on 571-272-7767. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AHT
Assistant Examiner
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/Tadesse Hailu/
Primary Examiner, Art Unit 2173